

Claims

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1. ~~Anti-freeze protein which can be derived from plants characterised in that at least 40% its amino acids are from the group of Serine, Threonine and Asparagine.~~
 2. ~~Anti-freeze protein according to claim 1, which can be derived from grass.~~
 3. ~~Anti-freeze protein according to claim 1 having at least 80% overlap with the following amino acid sequence (SEQUENCE NO. 1):~~

~~D-E-Q-P-N-T-I-S-G-S-N-N-T-V-R-S-G-S-K-N-V-L-A-G-N-D-N-T-V-I-S-G-D-N-N-S-V-S-G-S-N-N-T-V-V-S-G-N-D-N-T-V-T-G-S-N-H-V-V-S-G-T-N-H-I-V-T-D-N-N-N-N-V-S-G-N-D-N-N-V-S-G-S-F-H-T-V-S-G-G-H-N-T-V-S-G-S-N-N-T-V-S-G-S-N-H-V-V-S-G-S-N-K-V-V-T-D-A~~

as well as modified versions thereof.
 4. Anti-freeze protein of claim 3, wherein the overlap is at least 95%.
 5. Anti-freeze protein of claim 4, wherein the overlap is 100%.
 6. Anti-freeze protein of claim 1, wherein the protein has been modified by glycosylation.
 7. Nucleic acid sequence capable of encoding for the anti-freeze protein of claim 1.
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8. Nucleic acid sequence of claim 7, having the sequence (SEQ ID NO:2)

GAT GAA CAG CCG AAT ACG ATT TCT GGG AGC AAC AAT ACT
GTC AGA TCC GGG AGC AAA AAT GTT CTT GCT GGG AAT GAC
AAC ACC GTC ATA TCT GGG GAC AAC AAT AGT GTG TCT GGG
AGC AAC AAC ACT GTC GTA AGT GGG AAT GAC AAT ACC GTA
ACC GGC AGC AAC CAT GTC GTA TCA GGG ACA AAC CAT ATC
GTT ACA GAC AAC AAC AAT AAC GTA TCC GGG AAC GAT AAT
AAT GTA TCC GGG AGC TTT CAT ACC GTA TCC GGG GGG CAC
AAT ACT GTG TCC GGG AGC AAC AAT ACC GTA TCT GGG AGC
AAC CAC GTT GTA TCT GGA AGC AAC AAA GTC GTG ACA GAC
GCT TAA

and alleles thereof.

9. Frozen food product comprising the anti-freeze protein of claim 1.
10. Food product according to claim 9, being a frozen confectionery product.
11. Method of obtaining an AFP according to claim 1, whereby the AFP is produced by a genetically modified organism.
12. Method according to claim 11, wherein the organism is a microorganism or a plant line.
13. Plant, capable of expressing the protein of claim 1 ~~or~~ ² and having an increased frost tolerance.